

REMARKS

The issues remaining outstanding in the present application are the rejections under 35 U.S.C. 102 and 103. The Examiner is thanked for indicating in the Final Rejection the withdrawal of all prior rejections and objections.

The foregoing amendment (previously denied entry) places the features of claim 10, the use of a compatibilizer for the insulating liquid base and the polysiloxane, in claim 1. Claims 10 and 17, which formerly recited the compatibilizing agent generically, have been amended in order to recite species of compatibilizers, as disclosed at pages 11 and 12 of the specification.

Accordingly, the only rejection which is relevant subsequent to the present amendment is that in paragraph 11 at page 8 of the office action, applied against claims 10, 17 and 18. These claims were rejected under 35 U.S.C. 103 over Pause '773 taken with Buckingham '129. Reconsideration of this rejection is respectfully requested.

Pause discloses silicone rubber materials containing finely divided phase change materials, and a process for their production. See column 1, lines 18-21. Pause discloses a method for thermal insulation of cables or thermal protection of technical products employing a silicone rubber matrix containing the finely divided phase change materials, emulsified or dispersed in a cross-linked silicone rubber structure. See column 3, lines 16-28. The silicone rubber matrix is formed by mixing the phase change material in a liquid silicone rubber having a cross-linking agent (e.g. a hydrogen-functional polysiloxane) and a catalyst. As admitted at page 8 of the office action, Pause fails to teach the use of a compatibilizing agent. However, the Final Rejection and Advisory Action argue that the use of a compatibilizing agent to homogenize a mixture of components that are immiscible with each other is well known, and thus, it is concluded, it would be obvious to use a compatibilizing agent in a gelable composition such as that of Pause. Applicants continue to respectfully disagree with this analysis.

Pause does not teach the need for a compatibilizing agent, inasmuch as the *crystalline* alkyl hydrocarbon phase change materials employed therein are taught to be stable, do not flow out of the silicon rubber structure in liquid stage and are first melted. See columns 3 and 4 of the patent.

Buckingham fails to teach the need for a compatibilizer in a material such as that of Pause, inasmuch as Buckingham is directed to an entirely different art area, and employs different components. Buckingham, directed to cosmetic and hair care preparations, employs a silicone fluid and silicone immiscible organic substances which are not phase change materials. For example, the Applicants teach organic oils or other “personal care ingredients.” See paragraph [0049]. The Advisory Action counters this argument with the assertion that Buckingham is applied as “evidence to support the fact that it is well-known in the art to use a compatibilizing agent to homogenize a mixture of components that are immiscible with each other.” Applicants do not disagree with this analysis; however, this side steps the question discussed above of *why* one of ordinary skill in the art would find the need for a compatibilizer in Pause. Again, Pause does not suggest that such a compatibilizer is needed, nor does Buckingham.

Moreover, even the combination of references fails to teach the specific compatibilizer presently claimed, that is, one which is a molecule with the same nature as the insulating liquid base that can be grafted onto the polysiloxanes during cross-linking. (The present amendment finds additional support in the present specification at page 7, lines 19-22 and in claim 15). Instead, the compatibilizer component (C) taught in Buckingham is the siloxane-based polyamide itself, which disclosure thus does not suggest using such resin in the materials of Pause where a siloxane is already present (as a cross-linking agent). Thus, Buckingham does not suggest a composition in which the polysiloxane resin, regardless of a compatibilizer for the phase change material, instead compatibilizes the polysiloxane resin and the phase change material itself. It is obvious to choose among thousands of compounds useable as compatibilizing agents one which can react during the cross-linking of the gelling with the Si-H bounds of the other resin of the gelling agent in order to improve the stability of the insulating gel over the time, because the hydrosilane functions consumed by grafting the compatibilizing agent can no longer take part in the cross-linking and node formation. The cross-linking of the gel is important because it allows the capture of the phase change material in the gel. If the cross-linking is disturbed, the capture of the phase change material will not be efficient and the gel will not exert its insulating effect. So one skilled in the art would *not* have modified a gel by the

addition of a compatibilizing agent which reacts the Si-H bounds of the resin and which can change the cross-linking of the gel. Instead, one skilled in the art would have chosen a compatibilizing agent which optimizes the chemical compatibility between the insulating base and the gelling agent without reacting with the polysiloxane resin during its cross-linking.

As a result, it is submitted that this combination of references fails to suggest the present claim 1. In addition, it is submitted that the particular compatibilizers recited in claims 17 and 18, vinyl compounds, and octadec-1-ene and allylbenzene, are not suggested by the Buckingham disclosure, which discloses, e.g., polysiloxanes as compatilizers. Indeed, the Buckingham disclosure of hair-care products is so far afield from either the primary reference or the present claims, that it is simply irrelevant. It is therefore respectfully submitted that the combination of references fails to suggest the present claims, and withdrawal of the rejection under 35 U.S.C. 103 is respectfully requested.

The claims of the application are submitted to be in condition for allowance. However, should the Examiner have any questions or comments, she is cordially invited to telephone the undersigned at the number below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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